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Prep: 4th period

2016-2017

Help Hours:
Before or after school **by appointment**, PRIDE



General Science 9: Syllabus

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What is a Syllabus: A syllabus is an outline and summary of topics to be covered in an educational or training course. A syllabus is meant to provide students receiving the education or training with a knowledge of what to expect, starting and ending points, policies and procedures.

Course Outline

General Science 9 is composed of four science disciplines:

Geology (MP1) Meteorology (MP2) Astronomy (MP3) Ecology (MP4)

*Note: Although each discipline is addressed in separate marking periods, assignments pertaining to learning targets from a discipline other than the one currently at hand will occur. Retention of previously learned science concepts is paramount, especially for the end of the year final exam!

Geology Learning Targets:



Latitude / Longitude (Cartography)

- Reading latitude & longitude from variety of maps

Map Scale (Cartography)

- Map scale with real distances

Topographic Maps

- Reading topographic maps

Matter & Minerals

- Periodic tables
- Mineral characteristics
- Mineral classification
- Mineral identification

Rocks

- Rock types
- Rock cycle

- Rock identification

Continental Drift

- Earth structure
- Theory of continental drift

Theory of Plate Tectonics

- Theory of plate tectonics
- Sea-floor spreading
- Plate boundaries

Seismology

- Earthquake causes
- Seismic waves
- Hazards

Volcanology

- Causes
- Types of volcanoes
- Volcanoes and landforms

Earth's History

- Fossils & layers to determine past
- Carbon dating
- Time scale

Meteorology Learning Targets:



Atmosphere Characteristics

- Atmospheric structure
- Atmosphere characteristics

Heating the Atmosphere

- Heat transfer mechanisms
- Heat transfer in the atmosphere

Climate Controls

- Compare and contrast factors that affect climate
- Seasonal changes

Climate Changes

- Natural processes that change climate
- Global warming
- Compare and contrast climate change, global warming, and greenhouse effect

Pressure & Winds

- Definition of pressure
- Pressure centers
- Wind (global & local)

Air Masses & Fronts

- Air mass types
- Front types

Weather Maps & Prediction

- Reading weather maps
- Making weather maps
- Using maps to predict weather

Severe Storms

- Winter Storms
- Hurricanes
- Tornadoes

Water in the Atmosphere

- States of matter
- Humidity
- Cloud formation

Astronomy Learning Targets:



Introductory Concepts:

- What is Astronomy?
- Scale of the Cosmos
- Scientific Notation
- Concept of Space and Time

History of Astronomy

- Practice of Astronomy throughout different periods in human history
- Cosmological Views and Contributions of Ancient Cultures, The Greeks (Golden Age) and of famous Early Astronomers (Renaissance Period)
- Evolution of Our Understanding of the Universe

Newton's Gravity

- Properties of Gravity
- Newton's Laws & The Law of Universal Gravitation

Earth-Moon-Sun System (EMS)

- Earth Motions
- Lunar Motions
- Lunar Surface/History

The Celestial Sphere

- Motions of the Sky & The Celestial Sphere
- Constellations & Mapping the Sky

The Study of Light

- Electromagnetic Spectrum/Radiation
- Spectroscopy
- Doppler Effect

Tools for Studying Space

- Refracting Telescopes
- Reflecting Telescopes
- Radio Telescopes

- Special Telescopes

The Sun

- Structure/Organization
- Solar Activity
- Solar Interior

Stellar Properties & Stellar Evolution

- Stellar Characteristics
- Measuring Distance
- Stellar Brightness
- H-R Diagram
- ISM
- Star Birth
- Main Sequence
- Burnout and Death
- Stellar Remnants

Galaxies/Cosmology & SETI

- Types of Galaxies
- The Universe
- Search for Extraterrestrial Intelligence

Ecology Learning Targets:



Biomes & Biotic/Abiotic Factors

- Earth's Major Biomes
- Levels of Organization
- Aquatic & Terrestrial ecosystems

Limiting Factors

- Limiting factors & carrying capacity
- Ecological succession
- Cedar Glade Lab

Food Webs & Energy in an Ecosystem

- Food chains/food webs
- Food Web Matching Activity
- Owl Pellet Lab

Biodiversity

- Interactions among organisms
- Threats to biodiversity

Populations

- Ecological footprint
- Human Population Growth & Impact

Cycles of Matter

Textbooks

- Prentice Hall Earth Science – Tarbuck & Lutgens 2009
- Holt McDougal Environmental Science – Heithaus & Arms 2013
- *Various other textbooks will be referenced

***Note – all textbooks are to be kept in the classroom. Students may not take any textbooks home. Students may make photocopies of textbook material should they wish to do so. All main textbooks can be accessed online.**

Online Resources

- www.wallacescience16-17.wikispaces.com and links contained within.

Classroom Policies

- Absolutely **NO GUM**. Students will receive one warning after the first day, and it will be noted on the seating chart. Beyond the first and only warning, detentions will be awarded to students who neglect this rule. Repeated infractions will result in referrals to the office and more severe consequences.
- **Disrespect, harassment, disobedience, bullying, foul language and inappropriate behavior - ZERO TOLERANCE**. Education is a privilege and there are many who do not have the opportunity to learn in this type of formal school setting. Students who cannot control their words, actions and behavior, will not be with us long.
- **Recycle!** Paper, plastic, cans, glass, metal are all recycled in room 123. Please find the appropriate receptacles near the entrance to the room.
- Unless given permission, **cellphones/iPods/MP3 etc.** devices must remain turned off and out of sight. If you neglect this rule, your device must be surrendered to the office until the end of the day. This also applies to **headphones/earbuds**.
- **Healthy snacks** and drinks are allowed if appropriate. Drinks are limited to coffee in the morning (must be in non-spill travel mug) and water. No soda, fruit drinks, energy drinks, etc.
- Do NOT be **late to class** without a verified excuse note. Neglecting this rule can result in teacher assigned detention, disciplinary referral, etc. First late to class = warning, second and beyond = detention.
- **Leaving the classroom:** Students are to remain seated during class instruction/activities. To leave the room for visits to the nurse, lavatory, or nearest water fountain, students must have their own agenda book properly filled out, and must sign-out and sign back-in on the classroom log by the door. Agenda books are the responsibility of the student!

Students who lose their agenda book must purchase a new one at the office. **Please exercise good judgement when requesting to leave the classroom – do not interrupt the teacher or anyone else.**

- If a student needs to speak during class instruction, they must **raise their hand for permission.**
- Students are to be **silent when the class is being addressed** (by announcements, teacher, admin., videos, students presenting, etc.) and during tests and quizzes. At other times students may talk quietly. Students who cannot talk quietly will be asked to leave the room.
- **NO Hats/Hoods** on heads at any time (with the exception of theme or spirit days).
- **Please keep desks and room materials orderly and neat after usage.**
- Students are to **be prepared with notebooks, pencils and any handouts every day!**
- Become familiar with classroom resources and when to use them. Permission is not needed to use many of the materials – they are there for student use!

Grading

Grades are reported quarterly. Each marking period grade is determined using a $\frac{\text{Points Earned}}{\text{Points Possible}}$ grading system. Graded assignment point values and weights will vary. Final grades for the year will be determined by averaging the four marking period grades along with the final exam score. Throughout each marking period, students will be graded on the following:

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| ✓ Homework (completion and/or accuracy) | ✓ Final Exam |
| ✓ Notebook | ✓ Projects/Writing Assignments |
| ✓ Quizzes | ✓ Labs |
| ✓ Tests | ✓ Class Participation |

Other Info:

- Passing Grade = 60%
- Late Work – 10% **deduction per each day late**
- Report Card will include Percentage and Letter Grade (A, B, C, D, F)
- Grade Scale:
 - A: 100 – 90
 - B: 89 – 80
 - C: 79 – 70
 - D: 69 – 60
 - F: 59 and below
- Remediation Opportunities:
 - May only be done within the marking period in which specific content was covered.
 - May only be granted to students who are current with all assignments. If a student has not put in the effort prior to an assessment, no remediation opportunity will be available. **This determination is entirely up to the teacher.**

- Teachers will provide multiple assessment opportunities, using multiple modalities, to determine a student's understanding/skill level and to assign a final grade.
- If a reassessment opportunity is provided to change a grade on a given assessment, the highest score that can be earned is a 75%.
- Graded Assignment Weights:
 - Major Assignments (projects, writing assignments, notebook, research, labs, etc) 30%
 - Minor Assignments (worksheets, class work) 20%
 - Homework 10%
 - Assessments (Tests/Quizzes) 40%

Homework/Assessments

- **Homework** will serve as one or more of the following:
 - *Preview*: to prepare the student for an upcoming lesson/activity
 - *Practice*: To reinforce and practice the concepts related to learning targets taught in the classroom
 - *Evidence*: To show the student's level of understanding for one or more learning targets
 - *Enrichment*: To supplement learned content
- **Missing assignments** will be noted and must be completed prior to summative assessment for that Learning Target. I will not seek missing assignments from students; it is the student's responsibility to present late work or missing assignments. Work that is late more than 10 days will receive a zero.
- **Quizzes/Tests** – will occur each week. Be well prepared by reading/viewing/reviewing the assigned material and content.
- **Notebook** – Students are required to keep and organize all handouts and materials in one three ring binder, as well as maintain a neat and orderly composition notebook containing all homework reading/writing/math assignments, warm-ups, class work, etc. Student notebooks will be assessed each marking period for 100 points.

Materials

- Science folder (something to keep handouts and notebook in). A simple 2-3" three ring binder will be fine.





- Composition Notebook
- Pencil/Eraser **ABSOLUTELY NO INK PENS!!**
- Failure to come to class prepared with these items will result in poor class participation scores, which will negatively impact the student's overall grade

Important things to remember:

- Attitude is everything.
- More often than not, you reap what you sow.
- Although it may be at times difficult to muster, a polite and respectful demeanor can greatly impact the outcome of most interactions.
- Treat others as you would like to be treated.
- **Be the buffalo – “Cows run away from the storm while the buffalo charges toward it – and gets through it quicker. Whenever I’m confronted with a tough challenge, I do not prolong the torment, I become the buffalo.” Wilma Mankiller**
 - It’s a great image isn’t it? A herd of bison steadfastly and slowly progressing in the face of a blizzard rather than running in the other direction. When confronted with a problem, do you try to avoid it, or do you put your head down and find a way through? Working through tough times isn’t easy. It always seems more comfortable to turn the other way and try to outrun the storm. But invariably, the problem won’t go away, it just lasts longer and gets worse. We need to turn and face it head on. Sometimes, life is so overwhelming that you don’t know where to start. Marriage problems, health issues, financial pressures, work, teenagers, bills, the list can on and on sometimes. When life seems like a storm, be the buffalo. Put your head down and take a step. Do something. It can be a small step at first, something manageable, something that gets the momentum started. Then take another step, and another. I don’t know how long your storm will last or how intense it is. All that I do know is that the buffalo gets through it quicker and in better shape than the cow.